



COMDTINST 4100.7

31 MAY 1994

COMMANDANT INSTRUCTION 4100.7

Subj: COAST GUARD ENGINEERING LOGISTICS CONCEPT OF OPERATIONS
(ECONOP)

1. **PURPOSE.** To distribute the Engineering Logistics Concept of Operations.
2. **ACTION.** Area and district commanders, commanders of maintenance and logistics commands, commanding officers of Headquarters units, and chiefs of offices and special staff divisions in Headquarters shall ensure that the Engineering Logistics Concept of Operations receives appropriate distribution.
3. **BACKGROUND.**
 - a. In January 1992 the Engineering Logistics Steering Committee (ELSC) chartered a Quality Action Team (QAT) to develop a Vessel Logistics Concept of Operations (CONOP). This CONOP was approved by the Systems Coordinating Council (SCC) and signed by the Chief of Staff on 25 September 1992.
 - b. In May 1993, a subsequent QAT was chartered by the ELSC, and tasked to review the CONOP and incorporate the aviation and shore communities. The resulting ECONOP (enclosure (1)) was approved by the SCC and signed by the Chief of Staff on 22 April 1994.

DISTRIBUTION - SDL No. 132

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- c. The ECONOP is not a plan, it is a conceptual view of the optimal state of engineering logistics, and it provides a framework for the development of future business practices and information systems. It is a foundation on which to base our planning. It has already been used as a guide for Commandant Issues, Multi-Year Budget Strategies, the Logistics Master Plan, and as the basis for the Engineering Logistics Center Business Process Redesign.
4. **DISCUSSION.** Upon receipt of the ECONOP, please review the concept. Send any comments and/or suggestions to Commandant (G-ELM-1). Your opinion and input are important and will be used when revising the next ECONOP.



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Encl: (1) Engineering Logistics Concept of Operations (ECONOP)

U.S. Coast Guard

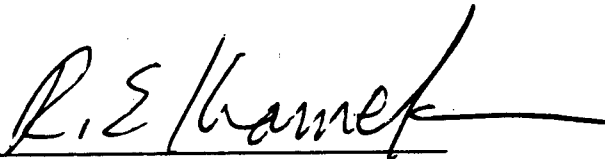
**Engineering
Logistics
Concept of Operations**



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FOREWORD

This is a Concept of Operations for the future U. S. Coast Guard engineering logistics system. It places emphasis on service to the operating customer and looks forward about ten years. To implement the future system, some significant changes will be required. However, with this concept as the common vision, plans to implement these changes can be orchestrated and integrated across organizational boundaries.



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Engineering Logistics CONOP**I. Introduction**

A. Purpose

The purpose of this Concept of Operations (CONOP) is to define the future Coast Guard engineering logistics system and describe how it will work in supporting its customers. The general intent is to ensure that all members of the engineering logistics community share a common vision of the future and are working toward the same ends.

Two specific objectives are: (1) to provide a conceptual view of the optimal state for Coast Guard engineering logistics, and (2) to provide a framework for the development of the business practices and information management systems needed to support engineering logistics for aircraft, shore facilities, and vessels, which are referred to generically as platforms. Throughout the document the term platform is understood to be anything that requires engineering logistics support.

B. Background

The decision to develop a CONOP arose from the need to have a common vision of the future state of Coast Guard engineering logistics which will bridge the gap between broad strategic visions, as discussed in the Values, Vision, Mission and Doctrine, and specific business plans. This detailed, conceptual view of the optimal logistics system serves as the end state toward which all logistics activities, and hence, all business plans, must lead.

The Vessel Logistics CONOP defined the optimal state for vessel logistics. This CONOP expands the scope of that effort to include all elements of engineering logistics: aviation, shore, vessel, and electronics.

C. Methodology

Representatives from the various Headquarters Offices and major field unit logistics suppliers, as well as key customer representatives, have been meeting over a two year period discussing logistics issues. On 5 May 1993 a Quality Action Team (QAT) was chartered by the Engineering Logistics Steering Committee (ELSC), consisting of members from the aviation, shore, and vessel communities. This team was asked to review the Vessel CONOP, and develop a CONOP which includes the individual engineering disciplines. The QAT met in a series of two day meetings over a period of five months. Through this effort they developed the Engineering Logistics CONOP.

It is important to understand that the CONOP is not a plan-- that is the function of the Logistics Master Plan and various other implementation plans. The CONOP document is a high level description of the future and this description must be based on solid principles. To be definitive and yet address how the future system will work, the CONOP must identify the critical system characteristics and significant functional roles. Finally, these principles, characteristics and role definitions must be easily understood and presented in a concise, easy to read document.

II. Principles

Any attempt to describe the future must begin by identifying the principles upon which it will be based-- the principles which will guide the implementation plans to move us toward the end state. This set of principles represents the most important values that will determine the future. They are grouped into five key categories: customer focus, decision making, decision support, measurement and work force. The principles are intended to be unconstrained by the current state of Coast Guard engineering logistics. Appendix I explains these principles in greater detail by expanding on the meaning of the key words and phrases in each principle.

A. Customer Focus

1. Operational missions must drive the logistics response, and the logistics system can help optimize operational effectiveness.
2. The logistics system will be customer-focused, proactive, flexible and responsive to the customer's changing needs.
3. The logistics system will minimize the logistics burden at units performing operational missions, consistent with operational effectiveness and logistics efficiency.
4. Each platform, system, and/or equipment, or configuration change thereto, will have integrated logistics support plans which will address logistics support required throughout its life cycle.

B. Decision Making

1. The logistics system will be led by a flag level advocate.
2. Logistics decisions will begin in the Concept Formulation Phase and continue through Acquisition, Sustainment, and Disposal based on a logistics system that fully integrates all logistics elements.
3. The logistics system decision making process will be team based. Cross-functional teams, including the customers, will be used to help resolve significant issues in logistics planning, policy, execution, resources, priorities, etc.
4. Requirements Based Planning will be used for resource and level of support decisions.
5. Logistics management decisions will consider life-cycle support issues. Economic decisions will be based on minimizing total costs.
6. Redundancies will be driven out of the Logistics System.

C. Decision Support

1. The logistics system will respond to changing needs through reengineering and continuous improvement.
2. The logistics system will be supported by an Integrated Logistics Information System. This system will provide for coordinated management decisions and interoperability with DOD/OGA/Commercial logistics networks.
3. The logistics system will be Configuration Based and capable of providing visibility of all assets at all levels.
4. The logistics system will be capable of driving out variability. Where variability is appropriate, the logistics system will be capable of managing it.
5. The logistics system will be capable of minimizing total costs by optimizing system-wide inventories.
6. The logistics system will have a cost accounting and benefit analysis system to support life cycle cost analyses.

D. Measurement

1. The primary measure of effectiveness will be how well engineering logistics supports operational requirements. The primary measure of efficiency will be the utilization of our resources.
2. The logistics system will be capable of measuring logistics performance at all levels.

E. Work Force

1. The logistics work force, both military and civilian, will have the job skills and tools needed to do the job.
2. Logistics professionals, both military and civilian, will be developed within professionally rewarding career patterns.

III. Logistics System Characteristics

The characteristics of the future engineering logistics system were developed to provide greater definition of the end state. They have been carefully written to avoid reference to any specific organizational solution. They were also selected, from among many possible characteristics, to be consistent with the principles identified earlier. However, there is not a one-to-one match between principles and characteristics. Several characteristics contribute to or support more than one principle. To facilitate future planning, characteristics have been grouped into the management functions of planning, organizing, resourcing, evaluating/informing and guiding/changing.

A. Planning

Strategic Direction. The Logistics Advocate will interpret the Commandant's strategic plan and set the direction, goals, and objectives of the Coast Guard logistics program and make macro-level adjustments to the distribution of logistics resources. The logistics system will provide the information necessary for the Logistics Advocate and others to evaluate the performance of the system with respect to these objectives.

Logistics Planning. Cross-functional teams will do integrated logistic system planning to support platform and equipment level maintenance and supply plans.

Maintenance and Supply Interdependence. Maintenance-related supply requirements will emanate from maintenance and operational plans. Likewise, the ability of the supply system to provide maintenance related requirements will be considered in the preparation of maintenance and operational plans. Supply planning will be integrated into maintenance and operational plans.

Maintenance Planning. Maintenance will be centrally planned and documented for each platform and for selected equipment types. The resulting plans will address maintenance at all levels (i.e., depot, intermediate, and organizational), for each integrated logistics support (ILS) element, and trigger the appropriate planning, programming, budgeting and evaluation.

Centralized Planning for Inventory Management. The purchase and inventory management of selected items, including the placement and quantity of inventory at all levels, will be centrally planned, based on responsiveness and cost considerations. The support plan will be coordinated with and visible to the user community.

Mandatory Checklists for Planning Support. Each ILS element will be examined when defining or changing the support plan for a platform, system, or equipment type. To ensure compliance, routine, mandatory checkoff procedures will be used to: (1) transition from one phase of the system life cycle to another and (2) approve design changes at any phase. The Logistics Advocate will review any request to waive compliance requirements.

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Planning for Surge Logistics. Logistics plans will be modified to reflect surge logistics needs for specific unusual missions.

B. Organizing

Integrated Project Management. Individual logistics projects will be planned, managed, and executed across organizational boundaries.

Configuration Control. Alteration and change will be managed by a configuration control process which considers all aspects of ILS during each phase of the life cycle.

Platform and Equipment/Systems Management. Platform and equipment/systems management will centralize logistics support planning. Planning and implementing configuration changes for a platform or major common system will be managed over its life cycle. Usage aberrations will be detected and corrective actions taken to reduce costs.

Support Manager. Each platform will have a designated support manager which will serve as the single point of contact for access to the logistics infrastructure. An appropriate infrastructure shall be established to provide logistics support for each platform. The types of service a platform may receive are: procurement, material receipt, material staging, retail inventory management, parts expediting, transportation, maintenance assistance, maintenance augmentation, maintenance shop services, port services, line services, consolidated spares, material inspection, quality assurance, etc. As the logistics support infrastructure is being developed, the number of customer points of contact shall be minimized, the goal being a single point of contact for each platform.

The Support Manager will facilitate requests for and delivery of logistics services. Platforms will have direct access to the logistics infrastructure whenever they deem such access is appropriate. Logistics requirements will be accommodated at the lowest organizational level where the capability exists to provide same.

Logistics Management. Logistics Management at the platform level will be centralized. The delivery of logistics services will be structured so as to minimize redundancy when serving several platforms within a common geographic or functional area.

Standard Customer Interface. The logistics system will have a uniform look and feel that does not vary by platform, equipment, unit type, or geographic location. This will be accomplished through standard, integrated policies, business practices, and information systems, which will not vary with platform design or mission.

C. Resourcing

Logistics Management Development. There will be post graduate education in logistics management, and post graduate education in other specific disciplines will emphasize logistics management.

Logistics Career Patterns. Career patterns for logisticians, consisting of a set of logistics management positions with defined prerequisites and billet/position descriptions, will be identified and defined.

Logistics Skills Training. There will be training in USCG logistics disciplines which will include how these disciplines are practiced in the USCG and how the various elements of logistics come together-- policy, standard operating procedures, and information systems-- to provide the support needed to meet the operational mission requirements.

Training on Equipment. Training on equipment will be provided for operators and maintainers based on equipment support requirements.

Support at Delivery. Platforms, systems, and equipment will be delivered with planned support in place.

Support Costs of Design Alternatives. The variations and, consequently, the cost of logistics support will be minimized by providing estimates on the life cycle support cost implications of design alternatives.

Minimum Spares Aboard Units. On-board inventories of non-critical, slow-moving/low-use supplies and selected backup equipment will be kept to a minimum.

Calculation of Allowances. Allowance calculation algorithms for parts and consumables will determine both platform and shore-based allowances and will account for mission criticality, operational availability, configuration, delivery time, weight, volume, area of operations, and cost.

Allowance Funding. The cost of initial allowances will be centrally funded. The authorizing organization will ensure that funds are available before authorizing any change.

D. Evaluating/Informing

Measures of Effectiveness/Efficiency. Critical measures of effectiveness, efficiency, predictability, etc., will allow the Logistics Advocate and others to monitor logistics performance and make continuous improvement.

Life-Cycle-Based Decision Making. Trade-off, cost-benefit, and value-added analytical techniques will be used to weigh operational requirements against the life-cycle costs of alternative design solutions.

Logistics Modeling Capability. Interactive logistics business models will be used to analyze the performance of logistics and do trade-off, "what if" and "target value" analyses. The models will include the ability to "drill down" through the integrated logistics information base to analyze the variables contributing to results that diverge from plans.

Financial Reporting. The logistics system will provide a financial reporting capability to support (a) planning and budgeting, (b) cost accounting and inter-organizational charging/billing, and (c) management accounting and cost benefit analysis.

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Transaction Data. Requisitions, work orders, and other logistics transactions will be automatically captured to feed management accounting and cost accounting systems.

Equipment Monitoring. Equipment condition monitoring data needed by the logistics system will be captured, where practicable, through direct interface with systems.

Configuration Data. Configuration based data, including technical information, will be recorded and maintained as a single integrated set of information for acquiring and supporting equipment and platforms. Information about the configuration will start to be collected during requirements documentation and continue to be used and maintained throughout the asset's life cycle.

Configuration Changes. There will be automatic notification and tracking of pending, planned, and approved configuration changes, including implementation status to the component level.

Source Data Automation The logistics database will be updated at the time and location of the event. A record of each event will be maintained for audit and analysis purposes. Proper actions will be triggered when planning a change and proper updates will occur as a result of change.

Information Systems Technology. Information systems for future USCG Logistics System users will have tools that facilitate the production, accessibility, and use of data. The IRM architecture to support this characteristic will be consistent with the G-E SIRMP.

Common Point of Access. Both providers and users will be able to access and exchange logistics information through their workstations.

Visibility of the Logistics System. Appropriate logistics information will be available to users at all levels of the organization, e.g. supply inventory, configuration, maintenance, and technical information. Accessibility of this information will empower users while providing for appropriate logistics system measurement/evaluation.

E. Guiding/Changing

Logistics Awareness Program. An information program will inform all USCG officers, enlisted personnel, and civilian personnel about the principles, policy, and business practices of USCG Integrated Logistics.

Common Terminology. Common terminology will be used for communication and information management.

Standards and Specifications. Established government and industry standards (e.g., LSA/MILSTD 1388), tailored as necessary, will be applied to each acquisition and modification.

Standard Configuration of First Platform of Class. The first platform of a new class or class-wide modernization will be treated as a prototype until it is retrofitted to conform to a class standard configuration.

Mandatory Allowances. Allowances will be mandatory and reflect quantities to be maintained.

Equipment Standardization. Equipment/Systems Management, for selected items, will emphasize service-wide equipment modernization and standardization and elimination of higher costs of supporting nonstandard equipments and systems.

IV. Logistics System Functional Roles

Role definitions are needed to describe how the system will work to support the units performing the operational missions. The following are considered the most significant roles for the future system. They are not intended to be all inclusive. As with the characteristics, the roles are defined functionally. The roles might be filled by either individuals or organizations, or both. They are not intended to be constrained to current organizations. Any of these functional roles could be implemented in several ways.

A. Functional Roles

1. Facility Manager

Translates the operating program needs into hardware (e.g. platform, system, and/or equipment) requirements.

- Describes the platform, system, and equipment requirements for the operating programs.
- Coordinates with the Logistics Advocate and the operating programs to ensure that the platform, system, and equipment requirements are met.
- Obtains and provides resources to the Logistics Advocate to support platform, system, and/or equipment requirements, including configuration changes and changes to the integrated logistics plans.
- Continually evaluates/improves the operational effectiveness of the platform, system, or equipment to meet mission requirements.
- Serves as a member of the configuration control board during the acquisition phase. Chairs the configuration control board through sustainment, and disposal phases of the platform, system, or equipment.
- Serves as a member of the Integrated Logistics Support Management Team (ILSMT) during the acquisition phase. Chairs the ILSMT to maintain the integrated logistics support plans during the sustainment phase.

2. Logistics Advocate

Manages the logistics system to satisfy platform requirements.

- Sets strategic direction, goals, objectives; establishes doctrine, policy, and procedures for integrated logistics.
- Coordinates with customers at all levels to ensure the logistics system supports operational missions.

- Obtains resources and makes macro-level distribution of resources to perform logistics functions.
- Continually evaluates/improves the performance of the logistics system.

3.3. Configuration Control Board

Cross-functional team that reviews proposed configuration changes in response to changing facility requirements.

- Ensures appropriate ILS elements are addressed.
- Makes decisions based on trade-off, cost-benefit and value-added analyses.
- Communicates approved changes.

4. Integrated Logistics Support Management Team

Cross functional team that develops, reviews and updates integrated logistics support plans in response to changing operational and logistical requirements.

- Ensures that appropriate ILS elements are addressed.
- Reviews and ensures that all support plans are current.
- Develops support plans for major acquisitions, alterations, modifications, and changes in operational requirements.

5. Acquisition Manager

Acquires a platform, system, or equipment which is supportable throughout its life cycle.

- Leads cross-functional teams to ensure all life cycle ILS elements are included in acquisition.
- Ensures that the equipment or platform acquired meets the sponsor's requirements.
- Makes decisions based on trade-off, cost-benefit and value-added analyses.
- At delivery ensures that all planned support is in place to commence the operational phase.
- Chairs the configuration control board through the Acquisition Phase of the platform, system, or equipment.
- Chair ILSMT through Acquisition phase of the platform, system, or equipment.

Engineering Logistics CONOP**6. Platform Manager**

Manages the logistics support for a platform during the Sustainment and Disposal Phases by developing and maintaining necessary support plans.

- Ensures there is a logistics support philosophy for the platform.
- Coordinates with customers (including Facility and Acquisition Managers) to ensure the platform supports the operational missions.
- Obtains and distributes resources from the Facility Manager via the Logistics Advocate to implement the support plan.
- Continually evaluates/improves the performance/reliability of the platform.
- Leads cross-functional teams to plan, develop, analyze, and recommend configuration changes. Manages the configuration data at the platform level during the sustainment phase.
- Serves as a member of the configuration control board during all phases of the life cycle of a platform, system, or equipment.
- Serves as a member of the ILSMT during all phases of the life cycle of the platform, system, or equipment. Ensures engineering logistics portions of the integrated logistics support plans are current during the sustainment phase.

7. Equipment/Systems Manager

Manages the logistics support for an equipment/system type, across multiple platforms, during all life cycle phases by developing and maintaining the equipment support plan.

- Ensures there is a logistics support philosophy for the equipment/system.
- Leads cross-functional teams in providing required logistical support, and to ensure all life cycle ILS elements are included in equipment acquisition.
- Ensures support for assigned equipments/systems are consistent with integrated support plans during sustainment phase.
- Ensures that the equipment continues to meet the sponsor's requirements.
- Coordinates with customers (including Facility and Platform Managers) to ensure the equipment supports the operational missions.
- Receives and distributes resources from the Facility Manager via the Logistics Advocate to implement the support plan.

- Continually evaluates/improves the performance/reliability of the equipment.
- Plans, develops, analyzes, and recommends configuration changes. Manages the configuration data at the equipment/systems level.
- Reviews all proposed configuration changes in response to changing requirements. Ensures all ILS elements are addressed.

8. Supply Manager

Supports platform, equipment, and maintenance management by executing commodity and item plans derived from the integrated logistics support plans for the acquisition, sustainment and disposal phases.

- Executes the supply portion of the integrated logistics support plan.
- Continually evaluates and recommends improvements to platform and equipment support plans.
- Performs centralized planning and management of system-wide inventory.
- Develops and analyzes supply data.

9. Maintenance Manager

Schedules and executes integrated maintenance support for assigned platforms which is beyond the capability of the platforms and support manager to provide or execute.

- Executes and manages funds for the major maintenance portion of the platform and equipment support plans.
- Coordinates unscheduled maintenance and casualty response beyond platform capability.
- Schedules and implements alterations and field changes.
- Serves as the technical consultant to the platform and their operational commanders.
- Continuously evaluates and requests improvement to platform and equipment support plans.
- Develops and analyzes logistics data.

10. Support Manager

For requirements which exceed the on-board capability of the platform, performs or arranges logistics support for assigned platforms, providing a single point of contact between the total logistics system and the platforms for the following:

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- Facilitates requests for and delivery of logistics services to the platform.
- Provides matrix management between the technical, maintenance, and supply functions.
- Provides or arranges maintenance support such as maintenance assistance, maintenance augmentation, material assessment, and, as directed by the maintenance manager, casualty response.
- Provides or arranges port services as directed by appropriate support plans.
- Provides or arranges logistics services for platforms which are without an on-board capability.
- Continuously evaluates and requests improvements to platform and equipment support plans.

11. Platform Level Logistics Manager

Schedules, coordinates, oversees, and performs organizational level maintenance which includes scheduled and unscheduled maintenance and repairs as required by the platform and equipment support plans.

- Ensures that all aspects of engineering logistics required for the platform to perform its mission have been addressed in accordance with the integrated logistics support plan, as modified by actual material conditions and any surge logistics dictated by unusual mission assignments.
- Responsible for unit level maintenance and supply tasks in accordance with platform and equipment support plans.
- Develops, analyzes, and updates maintenance and logistics data at the time of the event.
- Continually evaluates and recommends improvements to the platform and equipment support plans.
- Advises support Manager of logistic needs beyond unit capability.

If there are multiple platforms at a unit (i.e., aircraft, boats, ships, and/or shore facilities), the unit level command structure is responsible to integrate the logistics requirements of the multiple platforms. No additional structure is necessary, i.e., organizational level platform logistics managers report directly to the command structure.



V. Appendix I – Description of Principles

A. Customer Focus

1. Operational missions must drive the logistics response, and the logistics system can help optimize operational effectiveness.
 - (a) The operational missions are the starting point for planning logistics support. The mission criticality for each piece of equipment defines the priorities for logistics support.
 - (b) The logistics system includes all the resources (people, equipment, documentation, facilities, etc.) necessary to accomplish the logistics mission. This includes both manual and automated functions.
 - (c) Can help optimize operational effectiveness recognizes that logistics has a direct and continuous contribution to operational readiness -- the ultimate goal.
2. The logistics system will be customer-focused, proactive, flexible and responsive to the customer's changing needs.
 - (a) The customer uses the output from a logistics process. The end customer of the processing chain is the unit performing the operational mission. However, there are many customer-partner-supplier relationships along the way.
 - (b) A customer-focused system is the orientation for all design changes (i.e., changes to policy, procedures, information systems, technology, and organizations), assuring that the end customer of a process will benefit from change.
 - (c) A proactive 'push' orientation anticipates needs and assures the resources needed to accomplish a logistic's task are available where and when needed. The current system is 'pull' oriented, that is customers generally request support and resources.
 - (d) A flexible system recognizes the requirement to accommodate the changing needs of the logistics system's customers. The entire system promotes and accommodates change so that improvements are made for the customer's benefit as well as dealing with changes to USCG missions, the operating environment, and assets.
 - (e) A responsive system anticipates that there will always be the need to respond to customer requests, recognizing that all needs cannot be anticipated.

3. The logistics system will minimize the logistics burden at units performing operational missions, consistent with operational effectiveness and logistics efficiency.
 - (a) Minimize the logistics burden allows the units to focus on operational missions by off-loading logistics processes that the logistics system can perform automatically or more efficiently.
 - (b) Consistent with operational effectiveness - again recognizes that the ability to effectively execute the mission of the platform is the goal of the logistics system and should not be compromised for the sake of minimizing the logistics burden at the platform.
 - (c) And logistics efficiency- recognizes that efficiency is secondary to operational effectiveness.
4. Each platform, system, and/or equipment, or configuration change thereto, will have integrated logistics support plans which will address logistics support required throughout its life cycle.
 - (a) These support plans will address all integrated logistics system elements, tailored to the complexity and unique requirements of the acquisition or change.

B. Decision Making

1. The logistics system will be program level activity led by a flag level advocate.
 - (a) The flag level advocate for the logistics system will provide a logistics perspective, set logistics policy, and be the Commandant's primary advisor for logistics issues.
2. Logistics decisions will begin in the Concept Formulation Phase and continue through Acquisition, Sustainment and Disposal based on a logistics system that fully integrates all logistics elements.
 - (a) The Concept Formulation Phase brings operating, acquisition and support managers (including platform and equipment/systems managers) in at the beginning of the life cycle where significant support cost decision making occurs.
3. The logistics system decision making process will be team based. Cross-functional teams, including the customers, will be used to help decide significant issues in logistics planning, policy, execution, resources, priorities, etc.

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- (a) The decision making process encompasses logistics support decision making for life cycle phase transitions as well as the management and control of change.
 - (b) Team based decision making is a recognition of the existence of logistics across all support and operational programs.
4. Requirements Based Planning will be used for resource and level of support decisions.
- (a) Requirements Based Planning is a method which generates approved forecasts of support needs based on mission and customer requirements, priorities, and continuous evaluation of system performance.
5. Logistics management decisions will consider life cycle support issues. Economic decisions for the logistics system will be based on minimizing total costs.
- (a) Will consider— while life cycle cost considerations will be a primary factor in decision making, other issues may also influence decisions, such as quality of life, ability to execute, initial costs, etc.
 - (b) Life cycle support issues include acquisition issues (e.g., configuration management, maintenance planning, training support, technical data management, support equipment, etc.), Sustainment issues (e.g., obsolescence, maintainability, problems with supply sources, frequency and duration of down time, technological change, etc.), and disposal.
 - (c) Total costs emphasizes that decision making is based on the aggregate of all costs including manpower, materials, time, facilities, operational costs, etc.

C. Decision Support

1. The logistics system will respond to changing needs through reengineering and continuous improvement.
- (a) The reengineering methodology is used when taking a top down approach to system analysis and redesign. This approach is warranted when cross-functional problems exist. Sound business decisions will not be constrained by existing systems/practices.
 - (b) The continuous improvement methodology is used to incrementally improve a process.

2. The logistics system will be supported by an Integrated Logistics Information System. This system will provide for coordinated management decisions and interoperability with DoD/OGA/Commercial logistics networks.
 - (a) An Integrated Logistics Information System will take advantage of modern technology to meet the cross functional, cross organizational information requirements of logistics. A modern, integrated system will provide a database of logistics information where data need only be entered once to be available to all users.
 - (b) Interoperability will allow the automatic distribution to and access of selected information from external suppliers.
3. The logistics system will be Configuration Based and capable of providing visibility of all assets at all levels.
 - (a) A Configuration Based system provides timely and accurate technical information about Configuration Items (CI) and how they relate to other CI.
 - (b) Visibility of all assets at all levels provides information about the plans, physical population, physical locations, condition of the assets, etc. for facility, platform, equipment, and item management.
4. The logistics system will be capable of driving out variability. Where variability is appropriate, the logistics system will be capable of managing it.
 - (a) Driving out variability in equipment throughout the service reduces support costs and improves logistics support service. Variability in equipment increases the need for technical information and resources (i.e., people, parts, facilities, suppliers, funds, training, support equipment) necessary to maintain equipment.
 - (b) Where variability is appropriate recognizes the need to support nonstandard equipments that will be introduced into the logistics system. The logistics system will provide management capabilities to units for self sustained support of nonstandard items.
5. The logistics system will be capable of minimizing total costs by optimizing system-wide inventories.
 - (a) Optimizing system-wide inventories treats all physical items, regardless of location (i.e., shipboard, local shore side, and Supply Center inventories), as a single resource for supply management. This enables optimizing inventory.

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6. The logistics system will have a cost accounting and benefit analysis system to support life cycle cost analysis.
 - (a) A cost accounting and benefit analysis system will be developed to link all operational costs for a platform, system, and equipment. This system will enable the use of life cycle cost information to develop economic decisions that will be based on minimizing total costs.

D. Measurement

1. The primary measure of effectiveness will be how well engineering logistics supports the units performing mission requirements. The primary measure of efficiency will be the utilization of resources.
2. The logistics system will be capable of measuring logistics performance at all levels.
 - (a) Measures of logistics performance include responsiveness, cost effectiveness, reliability, availability, etc.

E. Workforce

1. The logistics workforce, both military and civilian, will have the job skills and tools needed to do the job.
 - (a) Have the job skill implies training and competence beyond classroom instruction, or previous experience, in the logistics disciplines and in the application of policies, procedures, and information systems of the USCG logistics system.
 - (b) Tools needed to do the job implies a commitment to find out what tools are available, what tools are needed, and to provide those tools to the workforce.
2. Logistics professionals, both military and civilian, will be developed within professionally rewarding career patterns.
 - (a) Professionally rewarding career patterns addresses the need to treat the management positions for Acquisition, Engineering, Maintenance, and Supply as an integrated set with the status of those in other career patterns. Logistics professionals must maintain a balance between speciality expertise, and resource, and policy management skills. Logistics professionals will be encouraged to broaden their general Coast Guard professional experience.
 - (b) The Flag level logistics advocate will be responsible for working closely with the Office of Personnel and Training to ensure proper career management for logistics professionals.



VI. Appendix II – Glossary of Terms

Centralized. Indicates that responsibility and authority for logistics requirements are vested in a single individual or office.

Integrated Logistics Support (ILS). A composite of all the support considerations necessary to assure the effective and economical support of a system for its life cycle. It is an integral part of all other aspects of system acquisition and operation. ILS is characterized by harmony and coherence among all the logistics elements. The principal elements of ILS include: maintenance planning; supply support; technical data; facilities; manpower and personnel; training and training support; support equipment; computer resources support; packaging, handling, storage and transportation; design interface. – Source COMDTINST 4105.2

Integrated Logistics Support Plan. The formal planning document for logistics support. It is kept current throughout the life cycle of the program, and sets forth the plan for operational support. Provides a detailed ILS program to fit with the overall program, provides decision-making bodies with necessary ILS information to make sound decisions in system development and production.

Logistics. The movement and maintenance of forces. Those aspects of military operation which deal with design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of materiel. – Source COMDTINST M4400.17. Also defined by: "A generic term which encompasses all those support activities associated with developing, acquiring, testing and sustaining the mission effectiveness of operating assets throughout their service lives".

Logistics Delivery Elements. The individual components of the logistics delivery system which enable provision of logistics services to the end user.

Logistics Delivery System. The complete system, comprised of the logistics infrastructure and the single point of contact, which provides the requested logistics services to the end user.

Logistics Infrastructure. The collection of resources that deliver logistics support to platforms.

Operational Availability (Ao). Ao is the probability that a system will be ready to perform the intended mission at a random point of time. Mathematically, it is computed as:

$$Ao = \frac{\text{UPTIME}}{\text{UPTIME} + \text{DOWNTIME}}$$

Uptime is the time that the system is operationally ready. In engineering terms, uptime is stated as the mean time between mission failure (MTBF). A mission failure is any item failure which directly renders the system inoperable or unable to perform its assigned mission.

Downtime is the time the system is not operationally ready. It consists of the maintenance time to repair a failed item and any logistics delay time in getting replacement parts if the repair includes a remove and replace action. In engineering terms, maintenance time for an item is given by its mean time to repair (MTTR). MTTR consists of the cumulative time to discover the failure, isolate the fault and accomplish the repair which could involve a simple maintenance action or a remove and replace action. Mean logistics delay time (MLDT) is accounted for as the sum of any maintenance delay time (MDT) and mean supply response time (MSRT).

Platform. An aircraft, cutter, boat or separately identified organizational entity provided with resources for the performance of a prescribed mission.

Surge Logistics. A sudden, unplanned increase in logistics requirements.